

REMARKS

Reconsideration of the pending claim in the above-identified application is respectfully requested on the basis that neither the Dreifus patent (U.S. Patent 4,812,634) nor the Poulachon patent (FR 2725084), whether considered collectively or individually, disclose or suggest each and every feature of the data carrier according to claim 1. As a result, the asserted combination of the Dreifus and Poulachon patents does not result in motivating one of ordinary skill in the art to devise the data carrier according to claim 1. Therefore, claim 1 is patentable and withdrawal of this rejection is kindly requested.

In the following discussion, it will be shown that both the Dreifus and Poulachon patents have insurmountable shortcomings that would preclude one skilled in the art of data carriers from making the data carrier according to claim 1. As a result, it will be clear from the discussion that the proposed combination of the Dreifus and Poulachon patents fails to amount to a case of *prima facie* obviousness.

a. Dreifus patent

Contrary to the assertion in the Office action, the Dreifus patent does not disclose or suggest a data carrier having a battery that powers a display on the data carrier, and a solar cell that is used to detect the usability or probability of use of the display. Instead, the elements in the Dreifus patent that are referred to in the action as corresponding to those of pending claim 1 simply do not match.

Turning specifically to the elements of the Dreifus patent, this patent describes a portable electronic transaction device and a terminal for receiving the device. The device includes a card having a central data processor, a fixed memory, an adaptable memory, optical means for transmitting and receiving information between the device and the terminal, and a power source. The device is arranged to operate in a standby mode during which it monitors itself for abnormal conditions, or in an operating mode during which it communicates with the terminal (col. 4,

lines 29-31). The device includes an encryption/decryption system for communicating with an associated terminal.

In the standby mode, the power for the card is supplied by an on-board battery (col. 4, lines 64-67). In this standby mode, the card monitors itself by an interrupt control circuit that monitors the features of the card and disables such features upon detection of physical intrusion or the sensing of an inoperative or marginally operative condition of the card (col. 5, lines 1-5). Moreover, the interrupt control is arranged to switch the card from the standby mode to the operating mode (col. 5, lines 6-7).

Contrary to the battery that powers the data carrier according to pending claim 1, the card of the Dreifus patent is powered by photocells when it is in an active mode (col. 5, lines 7-9). Thus, when the card is inserted into a terminal, a signal is received by a phototransistor on the card, light is received by the card's photocells, and the interrupt control, in turn, switches the card into the operating mode (col. 4, line 64 through col. 5, line 14).

The interrupt control circuit is described as detecting the presence of signals from clocks, and checks for a proper output level from the photocells. If all of the checks are valid, the interrupt control circuit switches the device from the standby mode to the output mode (col. 11, lines 28-40). Moreover, the interrupt control includes a low power signal that is connected to the battery, as shown in FIG. 6, which enables the interrupt control to monitor the voltage level of the battery (col. 12, lines 15-55). In the event the voltage drops below a threshold, the interrupt control unit disables operation of the card (col. 15, lines 44-52).

It follows that the battery is used in the stand-by mode, and the photocells are used in the operating mode. They do not appear to work in conjunction with one another, which on the contrary, is required in the data carrier of claim 1. Moreover, while in the standby-mode, the battery of the Dreifus patent continuously powers the

circuit since it monitors itself via its "watchdog" functions provided by the interrupt control circuit.

In accordance with the data carrier of claim 1, when the solar cell of the data carrier is not activated by a lack of light, the current flow between the battery and display is effectively prevented when the card is in an inactive state (page 2, 3rd full paragraph). This is an important result and advantage according to the pending application that is not obtained by the arrangement proposed by the Dreifus patent. Instead, the battery in the card according to the Dreifus patent continuously supplies power despite the fact that the card is in an inactive state.

Therefore, the operation of the card according to the Dreifus patent functions substantially different from the operation of the data carrier according to pending claim 1. It is thus submitted that the basic operation of the card in the Dreifus patent conflicts with the operation of the data carrier of pending claim 1, and moreover, the card in the Dreifus patent would be rendered unsatisfactory for its intended purpose if modified to cease operation in a stand-by mode.

It follows that there is simply no suggestion or desirability that would motivate one skilled in the art to eliminate the stand-by mode feature of the card in the Dreifus patent.

It is admitted in the action that the interrupt control circuit of the Dreifus patent governs the operation of the card and not a solar cell. It is also proposed in the action to essentially remove the interrupt control circuit of the Dreifus patent and replace it with a solar cell of the type recited in claim 1 of the pending application. Such removal of the interrupt control circuit of the Dreifus patent would be contrary to the teachings of the Dreifus patent since there would no longer be means for detecting the physical intrusion into the card.

As particularly indicated in the Dreifus patent, it is an object to provide a "portable electronic transaction device with stand-alone monitoring and intrusion detection capabilities" (col. 2, line 67 through col. 3, line 2). Accordingly, by

removing the interrupt control circuit of the Dreifus patent and replacing the same with a solar cell, this action would be contrary to a stated object of the Dreifus patent.

Accordingly, it is submitted that there is no suggestion in the Dreifus patent which would motivate one skilled in the art to use a solar cell instead of the interrupt control circuit.

In summary without even touching on the merits of the Poulachon patent, the proposed modification of the card taught by the Dreifus patent would change the principle of operation of the card described therein, and conflict with the stated purpose of the patent. Moreover, there is no suggestion or mention of desirability to modify the card of the Dreifus patent in the manner proposed to obtain the data carrier of pending claim 1.

b. Poulachon patent

The Poulachon patent is provided as a prior art teaching that shows a solar cell being used to detect the useability or probability of use of a display. Moreover, the interpretation in the action of the threshold voltage of the battery and the liquid crystal display of the electronic circuit of the Poulachon does not appear correct. As such, in view of the apparent shortcomings of the Dreifus patent, and the deficiencies of the Poulachon patent, the combination of the Dreifus and Poulachon patents do not motivate one skilled in the art to make the data carrier according to claim 1 of the pending application.

The Poulachon patent does not provide any suggestion that the battery (11) and the photodetector or solar cell (14) are connected or arranged in series. On the contrary, the Poulachon patent describes an electric circuit (12) having a liquid crystal display that is connected with the battery, and wherein a switch (13) is provided to interrupt the connection between the battery and the electronic circuit. The switch is clearly shown and described as being actuated by the solar cell, and the solar cell does not form part of the electronic circuit. It is therefore readily

apparent that there is no connection between the solar cell and the battery, either in series or in parallel.

It is respectfully submitted that contrary to the assertion in the action, the threshold voltage of the battery should be greater than the threshold voltage of the electronic circuit in the Poulachon patent. It is not comprehended how the action can interpret from the Poulachon patent that the threshold voltage of the electronic circuit is to be greater than the threshold value of the battery. The interpretation of the Poulachon patent does not make sense technically, since the electronic circuit cannot be driven by a battery having a voltage lower than the threshold voltage of the electronic circuit, as alleged in the action.

In view of this observation, it is submitted that a skilled artisan would not readily appreciate from the Poulachon patent that the threshold voltage of the electronic circuit is greater than the battery. To provide the arrangement suggested in the action in view of the Poulachon patent would make no sense and not lead to the creation of the data carrier according to claim 1.

It will be noted that the action is not entirely clear as to what features from the Poulachon patent are to be incorporated into the Dreifus patent to make the proposed combination of features to arrive at the data carrier according to pending claim 1. For the sake of argument, it will be assumed that the solar cell arrangement of the Poulachon patent is the feature that is to be incorporated into the proposed data carrier.

As a result of these observations, it is submitted that the Poulachon patent is ill suited as a reference for teaching, in view of the Dreifus patent, the data carrier according to claim 1.

c. Asserted combination of the Dreifus and Poulachon patents

In view of the observations of the Dreifus patent and the Poulachon patent, it is submitted that the combination of these patents fails to establish a *prima facie* case of obvious.

First, neither the Dreifus patent nor the Poulachon patent teach each and every feature required by claim 1 of the pending application. This is evident in view of the aforementioned deficiencies in the teachings of each of these references.

Second, there is no suggestion as to the desirability of modifying the Dreifus patent with the teachings of the Poulachon patent in the manner proposed in the action. Simply put, the Dreifus patent details certain objectives of its invention that are in opposition to the proposed modifications provided in the action. Similarly, the Poulachon appears bereft of any motivation that would encourage a skilled artisan to modify the Dreifus patent to arrive at the data carrier according to the pending application.

Third, even if the teachings of the Dreifus and Poulachon patents were combined, a skilled artisan would not be successful at making the data carrier of claim 1. This is particularly evident in view of the fact that not only would this materially alter the basic operational features of the Dreifus patent, such as removing the battery powered stand-by mode, but this would also require substantial reconstruction and elimination of the photo cells which supply power to the card when the card is in its active mode.

The basis in the action for combining the Dreifus and Poulachon patents fails to consider that the need to create a simplified circuit structure is nowhere to be found in the Dreifus patent. In fact, the Dreifus patent instead provides a robust and elegant solution to drawbacks in prior art devices that do not have stand-alone capability that prevent physical intrusion (col. 2, lines 17-26). There is nothing to suggest in the Dreifus patent the desirability of providing a card without stand-alone capability. If such stand-alone capability were removed, which it is contended it

would if the card of the Dreifus patent were modified as proposed in the action, the card would effectively be rendered as one of the prior art cards the invention of the Dreifus patent attempts to overcome.

By summarily removing interrupt control circuit of the Dreifus patent, the action proposes reconstructing the card in the Dreifus patent in a manner that is simply not suggested and is inconsistent with the basic teachings provided therein. In essence, the action has failed to establish a *prima facie* case of obviousness because replacing the interrupt control circuit in the Dreifus patent with the solar cell of the Poulachon patent would require "a complete restructuring" of the card shown in the Dreifus patent which was "not within the purview of obviousness."

It is well understood that in assessing differences, section 103 specifically requires consideration of the claimed invention "as a whole," and as such, consideration must be given to portions of the prior art reference that would lead away from the claimed invention. The "as a whole" instruction prevents evaluation of the invention part by part. Under the proposed combination of the Dreifus and the Poulachon patents, it is submitted that neither of these patents, when taken as a whole, provide ample teachings which would motivate a skilled artisan to make the data carrier of pending claim 1.

In summary, the Dreifus and Poulachon patents fail to provide any motivation for the proposed combination, and the remarks for the substitution of the solar cell of the Poulachon patent appear to be based entirely on applicants' own disclosure in an attempt to piece together the prior art so as to render the claimed invention obvious. As a result, the proposed combination of the Dreifus and Poulachon patents does not amount to a *prima facie* case of obviousness.

Accordingly, withdrawal of the rejection of pending claim 1 is respectfully requested in the next Office communication. Allowance of claim 1 is kindly requested and it is asked that the pending application be passed to issue.

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Examiner: Steve S. PAIK
Art Unit: 2876

If any issues remain that may be resolved by a telephone or facsimile communication with the applicants' attorney, the examiner is invited to contact the undersigned at the numbers shown below.

BACON & THOMAS, PLLC
625 Slaters Lane, Fourth Floor
Alexandria, Virginia 22314-1176
Phone: (703) 683-0500

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Justin J. Cassell", written in a cursive style.

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JUSTIN J. CASSELL
Attorney for Applicants
Registration No. 46,205